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# Lake Erie Fisheries Report 1984



Ontario

Ministry of  
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# Lake Erie Fisheries Report 1984

Prepared for the  
Lake Erie Committee Meeting  
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Prepared by the  
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Southwestern Region



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## A. RESUMÉ OF 1984 CATCH STATISTICS

### a. Commercial

In 1984, the total commercial catch reported from the Canadian waters of Lake Erie declined from that of 1983 by 9.7 million pounds to 36.0 million pounds (Table 1). The landed value of the catch increased from 17.6 million dollars in 1983 to 26.3 million dollars in 1984 (Table 2).

The catch of rainbow smelt continued to decline from 29.6 million pounds in 1983 to 16.1 million pounds in 1984, a decrease of 13.5 million pounds. The decline occurred primarily in the major smelt fishing areas in OE-4 and OE-5. Catch from the central basin statistical district OE-2 was 1.1 million pounds in 1983 and the smelt fishery in that area was essentially non-existent in 1984 with a reported catch of less than 3,000 pounds (Table 3). In 1984, the reduction in catch in OE-4 and OE-5 was attributed to declining abundance and the low abundance of smelt in OE-2 was not adequate to stimulate fishing for this species. The landed value of rainbow smelt declined to 1.6 million dollars in 1984 from 3.6 million dollars in 1983.

Total landings of yellow perch improved from 1983 to 1984 with the landed catch increasing from 5.7 to 9.2 million pounds (Table 2). The primary perch fishing districts of OE-1 and OE-2 experienced the greatest absolute increase over 1983. The total value of the yellow perch increased from 8.8 million dollars in 1983 to 16.8 million dollars in 1984.

The catch of white bass in 1984 was 4.3 million pounds and remained essentially unchanged from the 4.6 million pounds harvested in 1983 (Table 2). Consistent with the stability of harvest of white bass from 1983 to 1984, the value of the catch remained constant with the 1984 landed value being 1.8 million dollars.

The landed catch of yellow pickerel (walleye) as summarized from commercial fishermen's reports of landings increased from 3.2 million pounds in 1983 to 4.2 million pounds in 1984 (Table 2). The value increased from 3.2 million dollars in 1983 to 5.8 million dollars in 1984.

Lake whitefish were not allocated to the commercial fishery in 1984. Minor amounts reported were the result of incidental catch (Table 3).

White perch landings as reported by commercial fishermen continued to increase in 1984 with 630 thousand pounds being recorded. Currently white perch are taken incidentally in fisheries which target on other species. Records of catch of white perch exist at the species level when fish are sold for human consumption. Alternatively, white perch are marketed as part of the mixed species catch or they are discarded.





Data on age composition and mean length and weight at age for selected species sampled from the commercial catches are presented in Tables 4 through 9 inclusive.

b. Sport

In 1984, direct contact creel surveys were conducted on the summer boat fisheries in the following areas:

The vicinity of Chicken, Hen and East Sister Islands (Sector I)

The vicinity of Pelee Island (Sector II)

Long Point Bay (Sector VI)

In addition, the winter ice fishery in Inner Long Point Bay was surveyed, and an angler diary programme was initiated with charter boat operators.

In 1984, estimated angling pressure and estimated harvests (Tables 10 and 11) in the Long Point Bay summer fishery declined from those of 1983.

In the western basin (Sectors I and II) walleye fishery (Table 12), estimated angling pressure for 1984 declined by 32% from the mean for the previous three-year period while angler success rates for walleye improved.

A complete-trip, on-ice, winter creel survey at Inner Long Point Bay from January 3 to February 18, 1984 revealed that an estimated 103,858 rod-hours of angling pressure resulted in an estimated harvest of 275,954 yellow perch and small numbers of incidentally harvested rainbow smelt and northern pike.

The diary programme which was initiated with 35 known charter boat operators in 1984 has shown potential for providing good information. To increase the sample size, it will be expanded in 1985 to include members of angling clubs and other interested individuals who wish to participate.



Table 1. Canadian Waters of Lake Erie

## Commercial Landings

1960-1984

| Year              | Total Pounds | Total Value  |
|-------------------|--------------|--------------|
| 1960              | 28,181,000   | \$ 2,033,000 |
| 1961              | 36,350,000   | 2,516,000    |
| 1962              | 43,296,419   | 2,296,635    |
| 1963              | 34,069,000   | 2,523,635    |
| 1964              | 25,391,428   | 2,377,284    |
| 1965              | 35,096,120   | 3,319,307    |
| 1966              | 41,435,283   | 3,104,813    |
| 1967              | 37,775,009   | 3,339,460    |
| 1968              | 39,415,250   | 2,973,814    |
| 1969              | 48,025,996   | 4,244,149    |
| 1970              | 31,755,446   | 3,770,281    |
| 1971              | 29,075,559   | 4,254,692    |
| 1972              | 29,978,000   | 5,324,000    |
| 1973              | 39,829,000   | 7,038,000    |
| 1974              | 38,686,000   | 5,634,000    |
| 1975              | 30,548,620   | 6,009,093    |
| 1976              | 25,729,080   | 6,000,970    |
| 1977              | 35,853,556   | 7,736,701    |
| 1978              | 40,159,610   | 9,883,626    |
| 1979              | 40,839,668   | 17,555,598   |
| 1980              | 42,849,000   | 14,207,000   |
| 1981              | 44,711,277   | 20,279,830   |
| 1982 <sup>+</sup> | 55,588,000   | 27,002,000   |
| 1983 <sup>+</sup> | 45,682,046   | 17,613,206   |
| 1984 <sup>+</sup> | 36,004,933   | 26,315,406   |

+ Preliminary data.





Table 2. Commercial fish production and value from the Canadian waters of Lake Erie, 1983 and 1984<sup>a</sup> shown in millions of pounds and millions of dollars.

| Species               | 1983   |       | 1984   |       | Change<br>in<br>Catch | Change<br>in<br>Value |
|-----------------------|--------|-------|--------|-------|-----------------------|-----------------------|
|                       | Pounds | Value | Pounds | Value |                       |                       |
| Smelt                 | 29.6   | 3.6   | 16.1   | 1.6   | -13.5                 | -2.0                  |
| White bass            | 4.6    | 1.7   | 4.3    | 1.8   | -0.3                  | +0.1                  |
| White perch           | 0.06   | 0.02  | 0.6    | 0.2   | +0.54                 | +0.18                 |
| Yellow perch          | 5.7    | 8.8   | 9.2    | 16.8  | +3.5                  | +8.0                  |
| Y. pickerel (walleye) | 3.2    | 3.2   | 4.2    | 5.8   | +1.0                  | +2.6                  |
| Other                 | 2.5    | 0.3   | 1.6    | 0.1   | -0.9                  | -0.2                  |
| Total                 | 45.7   | 17.6  | 36.0   | 26.3  | -9.7                  | +8.7                  |

<sup>a</sup> Preliminary figures - not for publication.





Table 3. Lake Erie commercial fish landings by statistical district from Canadian waters of Lake Erie, 1984.  
(Preliminary only).

| Species                 | OE-1       | OE-2      | OE-3      | OE-4       | OE-5      | Total Landings (lbs) | Total Value (\$) |
|-------------------------|------------|-----------|-----------|------------|-----------|----------------------|------------------|
| Bowfin                  |            |           | 43        | 23,905     |           | 23,948               | 4,860            |
| Bullheads               | 93         | 9         | 190       | 47,401     | 91        | 47,784               | 12,424           |
| Burbot                  | 2          | 760       | 235       | 370        | 1,880     | 3,247                | 20               |
| Carp                    | 78,970     | 1         | 1,701     | 9,229      | 109       | 90,010               | 8,796            |
| Catfish                 | 51,446     | 4,454     | 1,230     | 3,090      | 293       | 60,513               | 24,285           |
| Crappies                |            |           | 940       | 20,296     |           | 21,236               | 29,469           |
| Eel                     | 5          |           | 4         | 338        |           | 347                  | 206              |
| Freshwater drum         | 107,238    | 109,191   | 35,079    | 244,533    | 14,476    | 510,517              | 46,645           |
| Gizzard shad            | 1,368      |           |           |            | 8,000     | 9,368                | 68               |
| Lake trout              |            |           |           | 659        | 61        | 720                  | 680              |
| Lake whitefish          | 367        | 224       |           | 2,324      |           | 2,915                | 1,091            |
| Northern pike           | 8          |           | 1,003     | 13,278     |           | 14,289               | 11,771           |
| Pacific salmon          | 3,601      | 1,256     | 629       | 499        |           | 5,985                | 4,369            |
| Quillback               | 6,246      |           |           |            |           | 6,246                | 480              |
| Rainbow smelt           | 4,233      | 2,975     | 3,182     | 14,058,818 | 1,986,800 | 16,056,008           | 1,571,609        |
| Rock bass               | 234        | 3         |           | 23,890     | 1,012     | 25,139               | 14,734           |
| Sturgeon                | 64         |           |           | 13         |           | 77                   | 138              |
| Suckers                 | 5,987      | 9         | 42        | 2,934      | 1,877     | 10,849               | 811              |
| Sunfish                 |            | 136       | 989       | 66,450     |           | 67,575               | 42,892           |
| White bass              | 2,052,476  | 1,058,452 | 617,004   | 515,621    | 64,959    | 4,308,512            | 1,814,607        |
| White perch             | 163,386    | 310,417   | 120,903   | 16,285     | 19,252    | 630,243              | 169,846          |
| Yellow perch            | 2,730,236  | 4,653,586 | 1,024,492 | 562,127    | 275,327   | 9,245,767            | 16,785,837       |
| Y. pickerel (walleye)   | 3,127,464  | 755,273   | 200,512   | 68,688     | 40,398    | 4,192,334            | 5,761,393        |
| Mixed                   | 275,834    | 196,181   | 65,197    | 59,387     | 74,706    | 671,305              | 8,373            |
| Total Landings (lbs)    | 8,609,258  | 7,092,927 | 2,073,374 | 15,740,134 | 2,489,241 | 36,004,933           |                  |
| Total Landed Value (\$) | 10,562,505 | 9,826,339 | 2,238,092 | 2,896,674  | 791,796   |                      | 26,315,406       |



Table 4. Year-class composition, average total length (cm) and weight (g) of yellow perch (sexes combined) from Lake Erie commercial catch samples by season and statistical district, 1984. n is sample size.

| Season <sup>a</sup> and<br>Statistical<br>District | Year Class | 1982  | 1981  | 1980  | 1979  | 1978  | 1977  | 1976 | n    |
|--|------------|-------|-------|-------|-------|-------|-------|------|------|
| Age  |            | 2     | 3     | 4     | 5     | 6     | 7     | 8    |      |
| Spring<br>OE-1                                     | % Comp.    | 0.6   | 27.9  | 65.6  | 5.4   | 0.4   | 0.2   |      | 520  |
|  | Length     | 15.6  | 19.9  | 20.3  | 20.9  | 23.2  | 21.9  |      | 520  |
|  | Weight     | 52.7  | 96.0  | 101.0 | 105.4 | 173.0 | 117.0 |      | 520  |
| Summer<br>OE-1                                     | % Comp.    | 8.3   | 60.1  | 30.9  | 0.6   |       |       |      | 760  |
|  | Length     | 18.7  | 19.4  | 19.7  | 20.3  |       |       |      | 760  |
|  | Weight     | 86.1  | 95.2  | 99.6  | 98.6  |       |       |      | 760  |
| Fall<br>OE-1                                       | % Comp.    | 23.2  | 58.9  | 16.7  | 1.1   |       |       |      | 439  |
|  | Length     | 20.0  | 20.2  | 20.9  | 21.4  |       |       |      | 439  |
|  | Weight     | 97.9  | 101.9 | 115.4 | 118.6 |       |       |      | 439  |
| Spring<br>OE-2                                     | % Comp.    | 0.3   | 39.1  | 57.5  | 3.0   |       |       |      | 933  |
|  | Length     | 16.8  | 19.8  | 20.6  | 21.4  |       |       |      | 933  |
|  | Weight     | 59.3  | 97.1  | 106.4 | 118.5 |       |       |      | 933  |
| Summer<br>OE-2                                     | % Comp.    | 20.8  | 45.8  | 32.4  | 0.8   | 0.1   |       |      | 1278 |
|  | Length     | 19.5  | 19.7  | 20.0  | 21.1  | 20.9  |       |      | 1278 |
|  | Weight     | 100.0 | 102.8 | 107.2 | 123.2 | 101.0 |       |      | 1278 |
| Fall<br>OE-2                                       | % Comp.    | 61.0  | 32.4  | 6.5   |       |       |       |      | 680  |
|  | Length     | 19.8  | 20.6  | 20.7  |       |       |       |      | 680  |
|  | Weight     | 102.9 | 115.1 | 115.9 |       |       |       |      | 680  |
| Spring<br>OE-3                                     | % Comp.    | 1.2   | 54.9  | 41.0  | 2.7   | 0.2   |       |      | 483  |
|  | Length     | 16.5  | 19.8  | 21.0  | 23.0  | 22.5  |       |      | 483  |
|  | Weight     | 55.5  | 98.6  | 116.3 | 165.5 | 129.0 |       |      | 483  |

<sup>a</sup> Spring = April-June, Summer = July-September, Fall = October-December.





Table 4 continued.

| Season and<br>Statistical<br>District | Year Class                  | 1982                  | 1981                  | 1980                  | 1979                  | 1978                 | 1977                 | 1976 | n                    |
|---------------------------------------|-----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|----------------------|------|----------------------|
| Age                                   | 2                           | 3                     | 4                     | 5                     | 6                     | 7                    | 8                    |      |                      |
| Summer<br>OE-3                        | % Comp.<br>Length<br>Weight | 28.4<br>19.6<br>110.2 | 64.1<br>20.5<br>120.3 | 7.2<br>22.8<br>172.3  |                       | 0.2<br>30.5<br>436.0 |                      |      | 408<br>408<br>408    |
| Fall<br>OE-3                          | % Comp.<br>Length<br>Weight | 51.7<br>21.0<br>130.5 | 41.4<br>21.8<br>147.9 | 6.9<br>23.8<br>193.4  |                       |                      |                      |      | 360<br>359<br>360    |
| Spring<br>OE-4                        | % Comp.<br>Length<br>Weight | 0.4<br>19.4<br>90.6   | 39.9<br>19.8<br>98.1  | 41.5<br>20.6<br>107.5 | 16.4<br>21.2<br>113.9 | 1.5<br>23.6<br>177.9 | 0.1<br>21.2<br>112.0 |      | 719<br>718<br>719    |
| Summer<br>OE-4                        | % Comp.<br>Length<br>Weight | 12.2<br>19.3<br>102.1 | 56.9<br>19.7<br>106.6 | 24.9<br>20.0<br>106.5 | 5.3<br>20.6<br>117.1  | 0.5<br>23.5<br>176.4 |                      |      | 1639<br>1636<br>1637 |
| Fall<br>OE-4                          | % Comp.<br>Length<br>Weight | 44.3<br>20.4<br>114.2 | 49.4<br>21.4<br>135.0 | 4.9<br>21.5<br>132.9  | 1.3<br>23.0<br>163.6  |                      |                      |      | 559<br>559<br>559    |
| Spring<br>OE-5                        | % Comp.<br>Length<br>Weight |                       | 78.6<br>20.6<br>110.1 | 14.5<br>22.3<br>137.0 | 4.7<br>23.2<br>160.2  | 1.9<br>26.1<br>229.3 | 0.3<br>29.2<br>350.0 |      | 320<br>315<br>320    |
| Summer<br>OE-5                        | % Comp.<br>Length<br>Weight | 13.0<br>20.3<br>114.0 | 76.9<br>21.0<br>121.8 | 8.4<br>22.3<br>147.9  | 1.4<br>23.4<br>183.7  | 0.2<br>24.2<br>188.0 |                      |      | 438<br>438<br>438    |
| Fall<br>OE-5                          | % Comp.<br>Length<br>Weight | 33.3<br>20.6<br>120.5 | 59.7<br>21.4<br>133.6 | 5.0<br>22.2<br>147.1  | 1.9<br>21.9<br>142.7  |                      |                      |      | 160<br>159<br>160    |





Table 5. Year class composition, average total length (cm) and weight (g) of rainbow smelt (sexes combined) from Lake Erie commercial catch samples by season and statistical district, 1984. n is sample size.

| Season <sup>a</sup> and<br>Statistical<br>District | Year Class<br>Age | 1983<br>1 | 1982<br>2 | 1981<br>3 | 1980<br>4 | n   |
|--|-------------------|-----------|-----------|-----------|-----------|-----|
| Winter<br>OE-4                                     | % Comp.           |           | 71.6      | 27.4      | .9        | 532 |
|  | Length            |           | 12.8      | 14.1      | 15.8      | 530 |
|  | Weight            |           | 10.6      | 15.1      | 20.8      | 532 |
| Spring<br>OE-4                                     | % Comp.           | 0.2       | 67.4      | 30.0      | 2.3       | 430 |
|  | Length            | 7.1       | 12.5      | 14.1      | 14.9      | 426 |
|  | Weight            | 2.0       | 9.9       | 14.0      | 16.5      | 430 |
| Summer<br>OE-4                                     | % Comp.           | 4.2       | 87.6      | 8.2       |           | 355 |
|  | Length            | 12.7      | 13.8      | 14.4      |           | 355 |
|  | Weight            | 12.0      | 15.9      | 18.9      |           | 355 |
| Fall<br>OE-4                                       | % Comp.           | 12.5      | 78.8      | 8.8       |           | 80  |
|  | Length            | 14.9      | 15.8      | 16.8      |           | 80  |
|  | Weight            | 23.1      | 24.9      | 28.0      |           | 80  |
| Fall<br>OE-5                                       | % Comp.           |           | 92.3      | 7.7       |           | 13  |
|  | Length            |           | 16.8      | 15.5      |           | 13  |
|  | Weight            |           | 27.2      | 20.0      |           | 13  |

<sup>a</sup> Winter = January-March, Spring = April-June,  
Summer = July-September, Fall = October-December.



Table 6. Year-class composition, average total length (cm) and weight (g) of yellow pickerel (walleye) (sexes combined) from commercial catch samples taken from large mesh gillnets (≥89 mm) in western Lake Erie (OE-1), by season, 1984. n is sample size. Data are presented for the two size categories into which walleye are sorted prior to landing.

| Season <sup>a</sup> and<br>Statistical<br>District                                     | Year Class | 1983 | 1982  | 1981    | 1980    | 1979    | 1978    | 1977    | 1976    | 1975 | n   |
|--|------------|------|-------|---------|---------|---------|---------|---------|---------|------|-----|
| Age  |            | 1    | 2     | 3       | 4       | 5       | 6       | 7       | 8       | 9    |     |
| Walleye in size category 1 (equal to or less than 534 mm in total length) <sup>b</sup> |            |      |       |         |         |         |         |         |         |      |     |
| Spring<br>OE-1   | % Comp.    |      | 3.0   | 33.9    | 47.2    | 9.4     | 5.0     | 1.1     | 0.3     |      | 703 |
|  | Length     |      | 37.6  | 43.4    | 48.5    | 52.2    | 53.5    | 57.8    | 58.1    |      | 702 |
|  | Weight     |      | 538.0 | 736.7   | 843.3   | 1,164.8 | 1,459.0 | 2,015.0 | -       |      | 80  |
| Summer<br>OE-1   | % Comp.    |      | 78.0  | 15.0    | 5.3     | 1.4     | 0.3     |         |         |      | 359 |
|  | Length     |      | 37.9  | 44.4    | 48.1    | 50.4    | 55.3    |         |         |      | 359 |
|  | Weight     |      |       |         |         |         |         |         |         |      | -   |
| Fall<br>OE-1   | % Comp.    | 0.7  | 93.9  | 3.4     | 1.3     | 0.1     | 0.1     | 0.1     |         |      | 700 |
|  | Length     | 37.0 | 40.8  | 46.7    | 51.6    | 50.6    | 61.0    | 57.3    |         |      | 700 |
|  | Weight     | -    | 703.2 | 1,012.7 | 1,445.0 | -       | 2,215.0 | -       |         |      | 100 |
| Walleye in size category 2 (greater than 534 mm in total length)                       |            |      |       |         |         |         |         |         |         |      |     |
| Spring<br>OE-1   | % Comp.    |      |       |         | 9.5     | 21.9    | 35.8    | 23.3    | 6.6     | 2.9  | 137 |
|  | Length     |      |       |         | 54.9    | 57.5    | 59.8    | 61.8    | 65.0    | 68.0 | 137 |
|  | Weight     |      |       |         | -       | -       | 2,006.0 | 2,246.6 | 2,465.0 | -    | 20  |
| Summer<br>OE-1   | % Comp.    |      | 52.5  | 25.0    | 17.5    | 2.5     | 2.5     |         |         |      | 40  |
|  | Length     |      | 40.6  | 45.4    | 49.1    | 54.0    | 49.9    |         |         |      | 40  |
|  | Weight     |      |       |         |         |         |         |         |         |      | -   |
| Fall<br>OE-1   | % Comp.    |      | 77.3  | 12.7    | 5.0     | 2.3     | 0.9     | 1.4     |         |      | 220 |
|  | Length     |      | 41.5  | 47.1    | 52.2    | 55.9    | 59.3    | 60.7    |         |      | 219 |
|  | Weight     |      | 802.6 | 1,143.0 | 963.0   | -       | 2,467.0 | -       |         |      | 20  |

<sup>a</sup> Spring = April-June, Summer = July-September, Fall = October-December

<sup>b</sup> Size category 1 represents 85% of the harvest by number.





Table 7. Year-class composition, average total length (cm) and weight (g) of white bass (sexes combined) from Lake Erie commercial catch samples by season and statistical district, 1984. n is sample size.

| Season <sup>a</sup> and<br>Statistical<br>District | Year Class                  |                      |                       |                       |                      |                      | n                   |
|--|-----------------------------|----------------------|-----------------------|-----------------------|----------------------|----------------------|---------------------|
| Age  | 1                           | 2                    | 3                     | 4                     | 5                    | 6                    |                     |
| Spring<br>OE-1                                     | % Comp.<br>Length<br>Weight | 0.7<br>27.6<br>-     | 74.6<br>30.1<br>363.7 | 22.4<br>32.9<br>458.8 | 1.8<br>35.4<br>522.0 | 0.4<br>36.9<br>-     | 1354<br>1354<br>120 |
| Summer<br>OE-1                                     | % Comp.<br>Length<br>Weight | 33.3<br>30.6<br>-    | 54.1<br>31.6<br>-     | 11.9<br>32.1<br>-     | 0.6<br>36.5<br>-     |                      | 318<br>318<br>-     |
| Fall<br>OE-1                                       | % Comp.<br>Length<br>Weight | 0.2<br>27.9<br>316.0 | 46.5<br>30.2<br>438.4 | 49.3<br>32.2<br>503.7 | 3.9<br>34.2<br>505.6 |                      | 1672<br>1670<br>200 |
| Spring<br>OE-2                                     | % Comp.<br>Length<br>Weight |                      | 79.9<br>30.2<br>397.5 | 18.7<br>33.3<br>547.8 | 0.4<br>37.4<br>775.0 | 1.1<br>36.9<br>711.7 | 556<br>556<br>398   |
| Fall<br>OE-2                                       | % Comp.<br>Length<br>Weight |                      | 30.8<br>30.3<br>423.1 | 1.9<br>36.6<br>-      | 0.6<br>38.1<br>-     |                      | 318<br>318<br>80    |

<sup>a</sup> Spring = April-June, Summer = July-September, Fall = October-December.

continued...



Table 7 continued.

| Season and<br>Statistical<br>District | Year Class                  |                      |                       |                       |                       |                      | n                 |
|---------------------------------------|-----------------------------|----------------------|-----------------------|-----------------------|-----------------------|----------------------|-------------------|
|                                       | Age                         | 1                    | 2                     | 3                     | 4                     | 5                    |                   |
| Spring<br>OE-3                        | % Comp.<br>Length<br>Weight |                      |                       | 60.0<br>29.8<br>393.8 | 40.0<br>33.1<br>550.9 |                      | 80<br>80<br>80    |
| Summer<br>OE-3                        | % Comp.<br>Length<br>Weight |                      | 27.5<br>30.0<br>406.2 | 65.0<br>32.6<br>535.8 | 7.5<br>36.1<br>726.0  |                      | 80<br>80<br>80    |
| Fall<br>OE-3                          | % Comp.<br>Length<br>Weight | 0.4<br>27.8<br>-     | 26.5<br>30.3<br>402.7 | 68.5<br>32.3<br>516.6 | 4.7<br>34.6<br>700.7  |                      | 558<br>558<br>158 |
| Spring<br>OE-4                        | % Comp.<br>Length<br>Weight |                      | 2.5<br>27.2<br>284.0  | 92.5<br>28.7<br>347.0 | 5.0<br>33.4<br>577.5  |                      | 80<br>80<br>80    |
| Summer<br>OE-4                        | % Comp.<br>Length<br>Weight |                      | 12.8<br>30.0<br>399.8 | 84.6<br>31.5<br>458.2 | 2.6<br>35.1<br>657.0  |                      | 78<br>78<br>78    |
| Fall<br>OE-4                          | % Comp.<br>Length<br>Weight | 0.8<br>28.7<br>354.0 | 18.9<br>30.3<br>423.3 | 76.6<br>32.4<br>545.7 | 3.8<br>34.5<br>723.3  |                      | 265<br>265<br>159 |
| Spring<br>OE-5                        | % Comp.<br>Length<br>Weight |                      |                       | 87.5<br>30.7<br>426.5 | 10.0<br>32.2<br>509.5 | 2.5<br>39.8<br>999.0 | 80<br>80<br>80    |





Table 8. Year-class composition, average total length (cm) and weight (g) of lake whitefish (sexes combined) from Lake Erie commercial catch samples by season and statistical district, 1984. n is sample size.

| Season <sup>a</sup> and<br>Statistical<br>District | Year Class |       |       |         |         |         |         |         |         |    | n |
|--|------------|-------|-------|---------|---------|---------|---------|---------|---------|----|---|
|  | Age        | 1982  | 1981  | 1980    | 1979    | 1978    | 1977    | 1976    | 1973    |    |   |
| Fall<br>OE-1                                       |            |       |       |         |         |         |         |         |         |    |   |
|  | % Comp.    | 25.6  | 32.6  | 26.7    | 4.7     | 2.3     | 4.7     | 2.3     | 1.2     | 86 |   |
|  | Length     | 39.4  | 43.6  | 47.5    | 49.0    | 55.9    | 53.9    | 59.2    | 54.5    | 86 |   |
|  | Weight     | 585.7 | 810.0 | 1,104.9 | 1,117.3 | 1,893.5 | 1,767.8 | 2,253.0 | 1,973.0 | 80 |   |

<sup>a</sup> Fall = October-December.



Table 9. Year-class composition, average total length (cm) and weight (g) of white perch (sexes combined) from Lake Erie commercial catch samples by season and statistical district, 1984. *n* is sample size.

| Season <sup>a</sup> and<br>Statistical<br>District | Year Class<br>Age | 1983<br>1 | 1982<br>2 | 1981<br>3 | 1980<br>4 | <i>n</i> |
|--|-------------------|-----------|-----------|-----------|-----------|----------|
| Spring<br>OE-1                                     | % Comp.           |           | 76.3      | 23.7      |           | 76       |
|  | Length            |           | 17.1      | 19.3      |           | 75       |
|  | Weight            |           | 70.5      | 111.4     |           | 76       |
| Summer<br>OE-1                                     | % Comp.           | 0.9       | 93.0      | 6.1       |           | 115      |
|  | Length            | 11.8      | 17.5      | 19.1      |           | 115      |
|  | Weight            | 22.0      | 84.7      | 109.4     |           | 115      |
| Fall<br>OE-1                                       | % Comp.           | 22.9      | 74.3      | 2.9       |           | 70       |
|  | Length            | 17.2      | 19.3      | 20.0      |           | 69       |
|  | Weight            | 79.7      | 119.8     | 141.5     |           | 70       |
| Spring<br>OE-2                                     | % Comp.           |           | 78.2      | 21.8      |           | 124      |
|  | Length            |           | 17.3      | 19.1      |           | 124      |
|  | Weight            |           | 77.7      | 108.0     |           | 124      |
| Summer<br>OE-2                                     | % Comp.           | 4.4       | 81.3      | 14.3      |           | 203      |
|  | Length            | 16.6      | 17.5      | 19.1      |           | 203      |
|  | Weight            | 66.0      | 83.6      | 109.0     |           | 203      |
| Fall<br>OE-2                                       | % Comp.           | 28.3      | 65.5      | 6.2       |           | 145      |
|  | Length            | 17.4      | 19.3      | 18.9      |           | 145      |
|  | Weight            | 82.5      | 127.0     | 110.1     |           | 145      |
| Spring<br>OE-3                                     | % Comp.           | 1.0       | 78.6      | 20.4      |           | 98       |
|  | Length            | 15.5      | 17.1      | 18.8      |           | 95       |
|  | Weight            | 50.0      | 77.5      | 109.3     |           | 98       |
| Summer<br>OE-3                                     | % Comp.           | 5.1       | 74.6      | 20.3      |           | 59       |
|  | Length            | 15.6      | 17.2      | 17.9      |           | 59       |
|  | Weight            | 57.7      | 78.1      | 87.8      |           | 59       |
| Fall<br>OE-3                                       | % Comp.           | 23.3      | 63.3      | 13.3      |           | 60       |
|  | Length            | 17.4      | 20.0      | 21.0      |           | 60       |
|  | Weight            | 88.0      | 147.8     | 171.1     |           | 60       |

<sup>a</sup> Spring = April-June, Summer = July-September,  
Fall = October-December.

continued..





Table 9 continued.

| Season and<br>Statistical<br>District | Year Class<br>Age | 1983<br>1 | 1982<br>2 | 1981<br>3 | 1980<br>4 | n   |
|---------------------------------------|-------------------|-----------|-----------|-----------|-----------|-----|
| Spring<br>OE-4                        | % Comp.           |           | 76.6      | 23.4      |           | 128 |
|                                       | Length            |           | 17.5      | 19.4      |           | 128 |
|                                       | Weight            |           | 81.9      | 118.3     |           | 128 |
| Summer<br>OE-4                        | % Comp.           | 3.8       | 85.5      | 10.3      | 0.3       | 290 |
|                                       | Length            | 15.6      | 17.2      | 19.5      | 23.7      | 290 |
|                                       | Weight            | 60.1      | 82.0      | 121.8     | 208.0     | 290 |
| Fall<br>OE-4                          | % Comp.           | 34.8      | 48.7      | 16.5      |           | 115 |
|                                       | Length            | 16.7      | 19.5      | 22.5      |           | 115 |
|                                       | Weight            | 72.6      | 133.3     | 207.4     |           | 115 |
| Spring<br>OE-5                        | % Comp.           |           | 55.7      | 44.3      |           | 79  |
|                                       | Length            |           | 17.7      | 19.2      |           | 78  |
|                                       | Weight            |           | 83.0      | 110.4     |           | 79  |
| Summer<br>OE-5                        | % Comp.           | 16.8      | 74.2      | 9.0       |           | 89  |
|                                       | Length            | 16.8      | 17.6      | 18.1      |           | 89  |
|                                       | Weight            | 72.0      | 87.0      | 95.2      |           | 89  |
| Fall<br>OE-5                          | % Comp.           | 35.9      | 59.0      | 5.1       |           | 39  |
|                                       | Length            | 16.0      | 19.8      | 22.8      |           | 39  |
|                                       | Weight            | 54.9      | 126.2     | 206.5     |           | 39  |



Table 10. Estimated sport harvest (in number kept) by sector on Lake Erie during summer creel census on Lake Erie, 1984.

| Species               | Sector <sup>a</sup> and Census Period |                    |                   |
|-----------------------|---------------------------------------|--------------------|-------------------|
|                       | I                                     | II                 | VI                |
|                       | July 1-<br>Aug. 31                    | July 1-<br>Aug. 31 | May 1-<br>Aug. 31 |
| Yellow perch          | 143                                   | 96                 | 59,042            |
| Y. pickerel (walleye) | 4,426                                 | 34,278             | 791               |
| White bass            |                                       | 278                | 447               |
| White perch           | 34                                    | 166                |                   |
| Smallmouth bass       | 808                                   | 5,104              | 40,751            |
| Rock bass             | 152                                   |                    | 38,242            |
| Freshwater drum       | 5                                     | 46                 | 1,722             |
| Largemouth bass       |                                       |                    | 4,246             |
| Northern pike         |                                       |                    | 3,273             |
| Pumpkinseed           |                                       |                    | 6,703             |
| Channel catfish       | 207                                   | 1,382              | 121               |
| Bluegill              |                                       |                    | 582               |
| Black crappie         |                                       |                    | 41                |
| White crappie         |                                       |                    | 498               |
| Total                 | 5,775                                 | 41,350             | 156,459           |

Sector   Area

I      Vicinity of Hen, Chick and East Sister Islands  
 II     Vicinity of Pelee Island  
 VI     Long Point Bay



Table 11. Estimated angling effort by sector during summer creel census on Lake Erie, 1984.

| Sector <sup>a</sup> and<br>Census-period | Effort    |              |
|--|-----------|--------------|
|  | Rod-hours | Angler-hours |
| I<br>(July 1 - August 31)                | 11,950    | 12,075       |
| II<br>(July 1 - August 31)               | 69,496    | 70,088       |
| VI<br>(May 1 - August 31)                | 279,175   | 293,936      |

<sup>a</sup>

| <u>Sector</u> | <u>Area</u>                                    |
|---------------|--|
| I             | Vicinity of Hen, Chick and East Sister Islands |
| II            | Vicinity of Pelee Island                       |
| VI            | Long Point Bay                                 |





Table 12. Comparative sport fishery statistics for walleye in the Western Basin (Sector I and II), Lake Erie, 1975-1984.

| Year | Estimated fishing effort (rod-hours) | Estimated catch (number) | Estimated harvest (number) | CUE <sup>a</sup> | CUE <sup>b</sup> |
|------|--------------------------------------|--------------------------|----------------------------|------------------|------------------|
| 1975 | 45,846                               | 7,707                    | 7,177                      | 0.168            | -                |
| 1976 | 97,176                               | 50,949                   | 49,029                     | 0.524            | -                |
| 1977 | 129,179                              | 70,561                   | 68,954                     | 0.559            | -                |
| 1978 | 146,098                              | 121,441                  | 112,057                    | 0.831            | 0.758            |
| 1979 | 95,555                               | 88,646                   | 77,765                     | 0.928            | 0.886            |
| 1980 | 91,237                               | 58,573                   | 56,356                     | 0.642            | 0.672            |
| 1981 | 136,398                              | 72,467                   | 69,799                     | 0.531            | 0.515            |
| 1982 | 106,566                              | 50,532                   | 48,058                     | 0.474            | 0.498            |
| 1983 | 116,649                              | 47,919                   | 40,177                     | 0.411            | 0.396            |
| 1984 | 81,446                               | 68,314                   | 38,704                     | 0.839            | 0.636            |

<sup>a</sup> CUE for walleye caught by all anglers derived from estimated effort and estimated catch.

<sup>b</sup> CUE for walleye caught by walleye anglers, derived from observed effort and observed catch.



## B. STATUS OF MAJOR FISH SPECIES

Relative indices of abundance for the young-of-the-year (YOY) of the major species in Lake Erie were generally greater than in previous years (Table 13). Good hatches of yellow perch, walleye, white perch and alewife were evident from sampling in the western basin. White perch were particularly strong in the western basin with some showing in the central basin. The lack of yearling smelt in index trawling confirmed the weakness of the 1983 year-class and there was a strong showing of YOY rainbow smelt particularly in the eastern basin.

Late summer bottom trawling in the western basin confirmed good hatches of the above species as well as for gizzard shad (Table 14). Indices for white perch, yellow perch and white bass were the largest for the period of bottom trawling in this basin.

### a. Rainbow smelt

Large numbers of yearling rainbow smelt were commercially harvested in the fall of 1982 and 1983. The 1982 year-class was expected to show strongly in the commercial fishery in the spring and fall of 1984, but this did not really occur.

Although the percent composition of yearling smelt (1982 year-class) captured in 1983 was only 20-30%, the disconcerting aspect is that yearlings were taken in the spring and summer in the central basin, in the spring, summer and fall, in the eastern basin and in the fall from the far eastern basin. The continued effort on this year-class and now with the lack of a strong 1983 year-class, prospects for 1985 are not encouraging until the latter part of the year when the relatively strong 1984 year-class will be recruited as yearlings. Some remnants of the 1982 year-class will still be available during the spring of 1985.

### b. Yellow perch

Catch per unit effort (c/f) (number per 1000 m of experimental gillnet) of yellow perch in all three basins decreased again in 1984. Although there were some increases (20%) in summer index catches in the western and central basins, overall c/f had significantly decreased; 20% lower in the western basin, 50% in the central basin and 56% in the eastern basin.

Although there was a broad range of age classes in the eastern basin samples during the spring and summer, c/f was reduced from that in 1983. The 1980 and 1981 year-classes were predominant in the spring with the strong 1982 year-class becoming more evident in the late summer (Table 15).



The presumably weak 1983 year-class made up 18% of the summer sample.

Catches in the central basin were down by about 20-40%. The strong 1982 year-class was very predominant throughout the spring, summer and fall (Table 15). Twenty percent of the samples was made up of the fair 1981 year-class. The weak 1983 year-class was present in spring samples but not evident in the summer and fall. The strong 1980 year-class was no longer present. The recruited 1982 year-class will likely continue to be available and dominant in the fishery through the spring and fall of 1985.

Index samples in the western basin in the spring and summer were mainly from the 1981 and 1982 year-classes (Table 15). In the fall, the 1982 year-class (60%) was strongest with a slight showing of the 1983 year-class. The strong 1982 year-class will continue to be available to the fishery in the spring and fall of 1985. The 1984 year-class is considered fairly strong but will not be recruited until 1986.

c. Yellow pickerel (walleye)

The 1982 year-class continued to dominate index gillnet catches from the western and west central basins. Although catch per unit effort (c/f) for this year-class as yearlings was not as great as the 1977 year-class as yearlings, the c/f as two year old fish was substantially greater (Table 16). Over 80% of the samples from both bottom and canned gillnets were from the 1982 year-class. Other minor contributors were from the 1981 year-class (4.4%) and the 1983 year-class (4%). These latter year-classes will continue to be represented in the population but the fishable stock in 1984 will again be dominated by the strong 1982 year-class. The good 1984 year-class will not be recruited to the fishery until 1985 and 1986.

d. White bass

A good hatch of white bass was evident from index trawling in the western and west-central basins. The index was approximately three times greater in the western basin. Index gillnet samples in the spring in the eastern and central basins showed that over seventy percent (70%) were from the 1981 year-class. Additional index gillnetting in the western basin showed a threefold increase in c/f from bottom gillnets. The majority of these fish were from the 1981 year-class with a good proportion from the 1982 year-class (Table 17).





e. White perch

Catch per unit of effort of white perch from experimental gillnets in the central and eastern basins was much greater than in 1983. Although there was a significant increase in catches during the summer in the western basin, overall c/f was down by 36% in early fall. However, additional bottom gillnetting in the late fall showed a large increase in c/f.

Three age-classes were present in index samples from each basin with the 1982 year-class predominating through all seasons and all areas (Table 18). This year-class and the subsequent 1983 year-class were quite strong and will continue in the fishery through 1985. The very strong 1984 year-class (Table 18) will become evident in 1985 and 1986.



Table 13. Relative indices of abundance (catch per trawling hour) of selected fish species at index fishing stations in the basins of Lake Erie, 1984.

| Species and<br>Age Group |       | L A K E   E R I E         |                           |                         | Whole<br>Lake             |
|--------------------------|-------|---------------------------|---------------------------|-------------------------|---------------------------|
|                          |       | Eastern                   | Central                   | Western                 |                           |
| Rainbow smelt            | YOY   | 7690                      | 627                       | 1506                    | 5196                      |
|                          | YRLG  |                           | 43                        | 18                      | 85                        |
|                          | ADULT | 217                       | 339                       | 6                       | 193                       |
| Yellow perch             | YOY   | 13                        | 184                       | 1031                    | 160                       |
|                          | YRLG  |                           | 8                         | 13                      | 5                         |
|                          | ADULT | 49                        | 14                        | 148                     | 112                       |
| Walleye                  | YOY   |                           | 1                         | 13                      | 1                         |
|                          | YRLG  |                           | <1                        | 12                      | 1                         |
|                          | ADULT |                           | 1                         | 5                       | 1                         |
| White bass               | YOY   | 6                         | 145                       | 53                      | 65                        |
|                          | YRLG  |                           | <1                        |                         | <1                        |
|                          | ADULT | <1                        | 2                         | 1                       | 1                         |
| White perch              | YOY   |                           | 151                       | 3263                    | 311                       |
|                          | YRLG  |                           | 4                         | 2                       | 3                         |
|                          | ADULT |                           | 5                         | 28                      | 4                         |
| Freshwater drum          | YOY   |                           |                           |                         | .                         |
|                          | YRLG  |                           | 1                         | 1                       | <1                        |
|                          | ADULT | 1                         | 6                         | 13                      | 5                         |
| Alewife                  | YOY   | 1                         | 324                       |                         | 129                       |
|                          | YRLG  | <1                        | 85                        | 1253                    | 244                       |
|                          | ADULT | <1                        | 533                       | 389                     | 205                       |
| Gizzard shad             | YOY   | 5                         | 9                         | 4                       | 7                         |
|                          | YRLG  | 1                         |                           | 249                     | 31                        |
|                          | ADULT | 3                         | 11                        |                         | <1                        |
| Spottail shiner          | YOY   |                           |                           |                         |                           |
|                          | YRLG  |                           |                           |                         |                           |
|                          | ADULT |                           | <1                        | 13                      | 1                         |
| Emerald shiner           | YOY   |                           |                           |                         |                           |
|                          | YRLG  |                           | 2                         |                         | 1                         |
|                          | ADULT | 814                       | 89                        | 256                     | 418                       |
| Trout perch              | YOY   |                           | <1                        | 1                       | <1                        |
|                          | YRLG  |                           | <1                        |                         | <1                        |
|                          | ADULT | <1                        | 2                         | 210                     | 21                        |
| Trawl Effort (minutes)   |       | 410<br>(410) <sup>1</sup> | 450<br>(310) <sup>1</sup> | 90<br>(60) <sup>1</sup> | 950<br>(780) <sup>1</sup> |

<sup>1</sup> Reduced effort used in calculating indices of young-of-the-year since the latter are not available to the sampling gear in the spring.



(number per trawling hour)

Table 14. Relative indices of abundance<sup>1</sup> of the major young-of-the-year species in western Lake Erie. Data for 1977-81 are the corrected<sup>1</sup> outboard trawl catches for the same 7 stations fished weekly from June to October. Data since 1982 are from bottom trawl catches at the same stations during late summer.

| Year | Walleye | Yellow Perch | White Bass | Freshwater Drum | Rainbow Smelt | White Perch | Effort <sup>2</sup><br>(minutes) |
|------|---------|--------------|------------|-----------------|---------------|-------------|----------------------------------|
| 1977 | 32      | 1088         | 344        | 122             | 183           |             | 1208                             |
| 1978 | 10      | 215          | 856        | 210             | 195           |             | 1021                             |
| 1979 | 2       | 327          | 185        | 83              | 178           |             | 1124                             |
| 1980 | 17      | 1510         | 415        | 32              | 242           | 24          | 939                              |
| 1981 | 5       | 642          | 444        | 39              | 76            | 112         | 920                              |
| 1982 | 191     | 1524         | 1105       |                 |               | 822         | 400                              |
| 1983 | 0.8     | 5            | 139        | 77              | 12            | 831         | 298                              |
| 1984 | 26      | 1914         | 3638       | 12              |               | 15297       | 240                              |

<sup>1</sup> Frontal gape and fishing area for the larger, bottom trawl was estimated to be 2.44 times greater than that for the outboard trawl. This factor was used to generate new indices for the 1977-81 period.

<sup>2</sup> Effort for 1977-81 includes weekly trawling from mid-June through October. Effort from 1982 is for a six week period in August-September.





| Age                        | 1983          | 1982 | 1981 | 1980 | 1979 | 1978 | 1977 | 1976 | 1975 | 1974 | 1973 | n |
|----------------------------|---------------|------|------|------|------|------|------|------|------|------|------|---|
|                            | 1             | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   |   |
| G<br>N<br>I<br>R<br>P<br>S | Eastern Basin |      |      |      |      |      |      |      |      |      |      |   |
|                            | % comp.       |      |      |      |      |      |      |      |      |      |      |   |
|                            | Length        |      |      |      |      |      |      |      |      |      |      |   |
|                            | Weight        |      |      |      |      |      |      |      |      |      |      |   |
|                            | 0.2           |      |      |      |      |      |      |      |      |      |      |   |
|                            | 11.2          |      |      |      |      |      |      |      |      |      |      |   |
|                            | 18.0          |      |      |      |      |      |      |      |      |      |      |   |
|                            | 35.8          |      |      |      |      |      |      |      |      |      |      |   |
|                            | 23.2          |      |      |      |      |      |      |      |      |      |      |   |
|                            | 18.0          |      |      |      |      |      |      |      |      |      |      |   |
|                            | 19.1          |      |      |      |      |      |      |      |      |      |      |   |
|                            | 91.7          |      |      |      |      |      |      |      |      |      |      |   |
| 4.3                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 1.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 22.7                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 202.4                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.4                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.6                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 450.5                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 516                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 148                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 171                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 472                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 23                         |               |      |      |      |      |      |      |      |      |      |      |   |
| 84                         |               |      |      |      |      |      |      |      |      |      |      |   |
| 306                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 148                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 182                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 497.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 382.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 28.4                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.6                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 1.1                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 23.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 184.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 97.0                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 20.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.7                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 91.1                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 97.1                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 19.5                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 10.1                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 79.0                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 77.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 18.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 21.4                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 6.0                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 55.6                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 20.0                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 79.0                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 20.0                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 21.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 1.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 23.7                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.6                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 217.7                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 280.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 28.0                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 18.1                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 1.5                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 8.9                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 18.4                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 93.9                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 96.8                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 18.6                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 2.8                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 1.8                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 18.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 64.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 58.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 17.4                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 22.8                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 44.4                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 15.9                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 44.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 27.9                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 13.6                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 30.4                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 55.4                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 14.9                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.4                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 68.0                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 93.4                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 19.4                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 5.4                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 2.7                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 23.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 163.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 93.4                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 17.9                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 24.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 50.4                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 71.6                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 18.1                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 20.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 96.9                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 233.5                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 26.7                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.4                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.5                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 456.1                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 494.0                      |               |      |      |      |      |      |      |      |      |      |      |   |
| 35.2                       |               |      |      |      |      |      |      |      |      |      |      |   |
| 0.2                        |               |      |      |      |      |      |      |      |      |      |      |   |
| 32.3</                     |               |      |      |      |      |      |      |      |      |      |      |   |



Table 16. Catch per unit of effort (catch/1000'gillnet) of walleye from Ontario bottom set index gillnets in western Lake Erie, fall 1978-1984.

| Year | Age Class |       |       |      |     |     |     |     |     | Total |
|------|-----------|-------|-------|------|-----|-----|-----|-----|-----|-------|
|      | 0         | 1     | 2     | 3    | 4   | 5   | 6   | 7   | 8   |       |
| 1978 |           | 24.81 | 1.15  | 4.55 | .71 | .13 |     |     |     | 31.35 |
| 1979 |           | .13   | 3.44  | 5.03 | .40 | .40 | .13 |     |     | 9.53  |
| 1980 |           | 5.10  | 2.89  | 1.06 |     | .19 | .10 |     |     | 9.34  |
| 1981 |           | 6.78  | 1.05  | .42  | .21 | .07 |     |     |     | 8.53  |
| 1982 |           | .45   | 2.63  | 1.47 | .32 | .13 | .26 |     | .07 | 5.33  |
| 1983 |           | 18.65 | 2.37  | 1.47 | .26 | .26 | .13 |     |     | 23.14 |
| 1984 | .06       | 1.47  | 31.22 | 1.67 | .83 | .58 | .26 | .06 | .13 | 36.28 |



Table 17. Year-class composition, average total length (cm) and average weight (g) of white bass (sexes combined) from index gillnetting (bottom and canned nets) in western and west central Lake Erie, fall 1984. n is sample size.

| Year Class                | 1983     | 1982     | 1981     | 1980     | 1979     | 1978     | n   |
|---------------------------|----------|----------|----------|----------|----------|----------|-----|
| Age                       | 1+       | 2+       | 3+       | 4+       | 5+       | 6+       |     |
| <b>Western Basin</b>      |          |          |          |          |          |          |     |
| No. of fish               | 10       | 200      | 292      | 25       | 2        | 2        | 531 |
| % comp.                   | 1.9      | 37.7     | 55.0     | 4.7      | 0.4      | 0.4      |     |
| Length+SD                 | 26.8+2.1 | 30.0+1.6 | 32.0+1.6 | 34.2+2.8 | 35.6+4.4 | 37.4+4.5 |     |
| Weight                    | 292.9    | 421.8    | 536.5    | 676.8    | 789.5    | 767.5    |     |
| <b>West Central Basin</b> |          |          |          |          |          |          |     |
| No. of fish               | 9        | 30       | 3        |          |          |          | 42  |
| % comp.                   | 21.4     | 71.4     | 7.2      |          |          |          |     |
| Length+SD                 | 30.7+1.7 | 31.9+1.6 | 31.5+2.2 |          |          |          |     |
| Weight                    | 464.9    | 542.5    | 502.3    |          |          |          |     |





Table 18. Seasonal year-class composition, average total length (mm) and average weight (g) of white perch (sexes combined) from index gillnetting in Lake Erie, 1984. n is sample size.

| Year Class                 |                      | 1983  | 1982  | 1981  | n   |
|----------------------------|----------------------|-------|-------|-------|-----|
| Age                        |                      | 1     | 2     | 3     |     |
| S<br>P<br>R<br>I<br>N<br>G | <u>Eastern Basin</u> |       |       |       |     |
|                            | % comp.              |       | 64.0  | 36.0  | 50  |
|                            | Length               |       | 161.7 | 180.7 |     |
|                            | Weight               |       | 62.8  | 87.8  |     |
|                            | <u>Central Basin</u> |       |       |       |     |
|                            | % comp.              |       | 67.3  | 32.7  | 101 |
|                            | Length               |       | 164.8 | 184.3 |     |
|                            | Weight               |       | 72.8  | 107.0 |     |
|                            | <u>Western Basin</u> |       |       |       |     |
|                            | % comp.              | 5.7   | 79.0  | 15.3  | 105 |
|                            | Length               | 101.3 | 149.3 | 194.9 |     |
|                            | Weight               | 11.7  | 51.9  | 120.4 |     |
| S<br>U<br>M<br>M<br>E<br>R | <u>Eastern Basin</u> |       |       |       |     |
|                            | % comp.              | 11.8  | 76.4  | 11.8  | 17  |
|                            | Length               | 145.5 | 166.1 | 223.0 |     |
|                            | Weight               | 47.0  | 74.3  | 177.0 |     |
|                            | <u>Central Basin</u> |       |       |       |     |
|                            | % comp.              | 10.0  | 50.0  | 40.0  | 10  |
|                            | Length               | 169.0 | 187.6 | 177.0 |     |
|                            | Weight               | 70.0  | 111.4 | 90.3  |     |
|                            | <u>Western Basin</u> |       |       |       |     |
|                            | % comp.              | 6.6   | 77.6  | 15.8  | 76  |
|                            | Length               | 120.6 | 166.0 | 193.3 |     |
|                            | Weight               | 25.0  | 78.9  | 125.6 |     |
| F<br>A<br>L<br>L           | <u>Central Basin</u> |       |       |       |     |
|                            | % comp.              | 39.0  | 53.7  | 7.3   | 41  |
|                            | Length               | 156.8 | 191.5 | 197.7 |     |
|                            | Weight               | 57.9  | 120.5 | 136.0 |     |
|                            | <u>Western Basin</u> |       |       |       |     |
|                            | % comp.              | 12.2  | 75.6  | 12.2  | 82  |
|                            | Length               | 163.1 | 187.5 | 204.0 |     |
|                            | Weight               | 65.8  | 110.4 | 147.6 |     |
|                            | <u>Combined</u>      |       |       |       |     |
|                            | No. of fish          | 40    | 344   | 98    | 482 |
|                            | % comp.              | 8.3   | 71.4  | 20.3  |     |



## C. CURRENT PROGRAMS AND FUTURE PLANS

### a. Fisheries Research Unit

#### 1. Index Fishing

Midwater trawling and index gillnetting will be continued in all basins of Lake Erie and in Lake St. Clair. Index bottom trawling during a six week period in the late summer will be done at index stations in the western basin and the west-central basin area.

#### 2. Yearling Walleye Index Gillnetting

This interagency program was continued in 1984 in an attempt to develop an index for walleye which would better reflect year-class strength.

The strong 1982 year-class was again most dominant in both bottom and canned gillnets from both the western and west-central basins.

#### 3. Walleye Tagging in Western Lake Erie

From 1981-1984 walleye captured with large mesh gillnet were tagged and released in the Pelee Island and Hen-Chicken Island area of western Lake Erie. Tagging was done in March, April and May of each year and all walleye were sampled and tagged with the oval disc tag at the nape of the neck. In each year the majority of walleye sampled were maturing and ripe males, age 2 and older.

Current results from lumped (1981-84) and individual year data show that most walleye (76%) were recovered in the western basin with about 14% recovery in the central basin and 2.8% in the eastern basin. The majority of returns in the central basin were however from the west-central area with a small percentage in the far east central area. Most recaptures ( $\approx 70\%$ ) were made in the spring of the tagging year. Recaptures in the central basin were made mainly in the summer and fall. Two fish from the 1981 tagging were recaptured in the east-central basin in 1983.

#### 4. Habitat and Fish Community in Mitchell Bay, Lake St. Clair

A study of the habitat and fish community in the Mitchell Bay-St. Luke area of Lake St. Clair was initiated in 1983. Data on water quality and distribution and abundance of different life stages of various fish species and crustacean zooplankton were collected and sorted from May to October in 1983 and



1984. Although turbidity is high due to resuspension of sediments, water quality in the Bay is generally good. When compared with data collected a decade earlier at stations at the mouth of the Bay and at the St. Luke area, water quality parameters have not changed significantly except nitrate-nitrogen which has doubled in concentration.

The project was expanded in 1984 to include a study of abundance and distribution of macrophytes. These data and those collected on young fish and crustacean zooplankton will be analysed in 1985. Sampling will also continue in 1985.

b. Lake Erie Fisheries Assessment Unit

1. Creel Census

Summer creel census will be continued in the western basin in 1985. Summer and winter creel census projects to be conducted by the Ministry's Simcoe District Office are planned for Long Point Bay. A summer creel census to be conducted by the Chatham District is planned for Rondeau Bay in 1985. The reinstatement of the Rondeau Bay census which had been conducted from 1977 through 1983 will complement an artificial reef evaluation study being planned by Chatham District for implementation in 1985.

2. Commercial Catch Sampling

The sampling of target and incidental species in the commercial catch will continue in 1985. With increased abundance of yellow pickerel (walleye) in the central basin in 1983, sampling of that species was initiated on a routine basis. In 1985, sampling of walleye in the central basin will continue at a level commensurate with the harvest.

3. Nanticoke Fish Study

The Nanticoke Fish Study was established in 1971 as part of a joint industry-government environmental monitoring program aimed at evaluating the impact of shoreline industrialization in the Nanticoke area of Long Point Bay. The 1983 field year marked the end of a three year period characterized by operational levels having been reached by the participating industries. In 1984, the results of the three year operational period were analysed and compared with the base-line conditions established between 1971 and 1978. Reports of that analysis will be prepared in 1985.





#### 4. Salmonid Sampling

In 1985, salmon and trout encountered in routine commercial sampling of target species will continue to be examined for lamprey scars and wounds as well as identifying marks. Similar observations will be made on salmonids taken in the sport fishery where arrangements with users can be made.

Stomach contents of salmonids will be sampled from sport caught fish in 1985.

#### 5. Young-of-the-Year (YOY) Trawling Index

In 1980, YOY index trawling was expanded in Long Point Bay following surveys conducted by the Research Unit in earlier years. This project was not carried out in 1983; however, the survey was resumed in 1984 and will be continued in 1985.

#### 6. Commercial Catch Reports

The responsibility for entry of data as reported by Lake Erie commercial fishermen on their daily catch and effort was decentralized to the Assessment Unit in 1980. This activity requires the coding of records provided by fishermen and entry of data into a provincial data base. While the data entry function will remain with the assessment unit in 1985, the system of data storage and retrieval will be upgraded in support of the fisheries modernization initiative.

#### 7. Central Basin Yellow Pickerel (Walleye) Reproduction Study

In 1984, a survey was conducted in the western part of the central basin to determine if walleye were reproducing in that area. Adult walleye were examined for maturity, eggs were pumped from suspected spawning areas, larvae were collected and juvenile fish were captured using beach seines and trawls. A report of the 1984 survey is in preparation.

In 1985, similar survey work is planned for the eastern part of the central basin.

### c. Management

#### 1. Regulation Changes

The regulation changes for sport fishing reported in 1984 will remain in place for 1985. There are no additional changes planned for 1985.





The commercial fishing regulations dealing with the individual quota system were challenged in a Judicial Review that commenced in September, 1984. A decision was released on October 15 suspending the quota system. A federal regulation became operational in mid-November resurrecting the quota system while the court decision was under appeal.

The appeal launched by the Province ended on November 15, 1984 and a decision was released on February 8, 1985. The Ontario Court of Appeal ruled that the legislation had been properly enacted and the individual quota system was valid. Some refinement of the legislation may be required and a review will take place during 1985.

## 2. Fish Stocking

Ganaraska River stock of rainbow trout, produced at the Normandale Fish Culture Station, were planted in a Lake Erie tributary for the first time in 1984. Use of this stock is planned for 1985. Two private plants of certified rainbow trout were made directly into Lake Erie. The two angling clubs involved planted the fish for mainly local put and take angling. Limited tag returns to date show a not unexpected dispersal of the fish planted off Erieau. Only one of these private plants is expected to continue during 1985.

The adult walleye transfer from the Thames River to Big Creek (Long Point Bay) took place for the third year in 1984. Results to date are encouraging with more walleye appearing in the creel of anglers fishing Long Point Bay although there may have been some influence from the easterly movement of western basin stock. The project will continue during 1985.

The following table outlines 1984 plantings and 1985 plans.

### 1984 Plantings

#### Rainbow trout

|           |   |                                  |                 |
|-----------|---|----------------------------------|-----------------|
| 12,000 yg | Ganaraska stock (Normandale FCS) Big Creek tributaries        | 42° 36'                          | 80° 27'         |
| 10,000 yg | certified hatchery stock (private plant) Port Stanley harbour | 42° 40'                          | 81° 13'         |
| 4,000 yg  | certified hatchery stock (private plant) Erieau vicinity      | 1,000 tagged with MNR #8 jaw tag | 42° 16' 81° 56' |

#### Walleye

|            |                              |         |
|------------|------------------------------|---------|
| 655 adults | Thames River stock Big Creek | 42° 36' |
|            | 80° 27' MNR metal jaw tags   |         |



1985 PlannedRainbow trout

|           |  |
|-----------|--|
| 14,000 yg | Ganaraska stock (Normandale FCS) Big Creek<br>tributaries 42° 36' 80° 27'                                |
| 4,000 yg  | certified hatchery stock (private plant)<br>Erieau vicinity 1,000 with MNR #8<br>jaw tag 42° 16' 81° 56' |

Walleye

|              |   |
|--------------|---|
| 1,000 adults | Thames River stock Big Creek 42° 36'<br>80° 27' 1,000 with MNR metal jaw tags |
|--------------|---|

d. Lamprey Scarring/Wounding Rates on Coho Salmon

In 1984, coho were examined during routine commercial catch sampling, supplementary commercial catch sampling, from the sport fishery and during the collection of specimens for contaminant analysis. Observations of lamprey scarring/wounding were made by Ministry staff and members of user groups.

From sampling conducted by Ministry staff, 244 coho were examined. Of these, 204 were age 2<sup>+</sup> fish and scars or wounds were observed on 9 fish (4%). Coho encountered in the spring (April-June) accounted for 73% of the fish examined.

In the period July through August, 459 coho (not aged) were examined by charter boat operators from Erieau to Long Point. Of these fish examined by operators, 10% exhibited scars or wounds.











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